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**PATENT ABSTRACTS OF JAPAN**(21) Application number: **54062676**(51) Intl. Cl.: **H01P 5/19**(22) Application date: **23.05.79**

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**(54) BRANCH TYPE HYBRID**

(57) Abstract:

**PURPOSE:** To improve remarkably the precision of a hybrid used at a high frequency by matching impedance at each terminal of the hybrid with the input-output impedance of a branch type hybrid circuit by impedance converting.

**CONSTITUTION:** In hybrid 20, branch type hybrid circuit 24 is constituted by connecting four strip lines 24a...24d of  $\lambda/4$  in a lattice shape. To increase ratio  $l/W$  of the width to length of each strip line, the impedance of circuit 24 should be characteristic impedance higher than impedance  $Z_0$ . Here, each impedance  $Z_0$  at terminals (a), (d) and (f) of hybrid 20 is converted 25 and 26 into impedance  $Z$  to match with the input-output impedance of circuit 24. Then, selecting width  $W$  of each strip line of circuit 24 makes it possible to improve the precision of the hybrid used at a high frequency without sacrificing band-pass characteristics.

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